

Hunter Fox

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EDUCATION

Fanshawe College

Ontario College Graduate Certificate, Advanced Programming Game Development

London, ON

Sept. 2023 - April 2024

Western University

Bachelor of Science in Computer Science, with Honours

London, ON

Sept. 2018 - May 2022

EXPERIENCE

Research Assistant

Fanshawe Centre for Research & Innovation

July 2024 – Nov 2024

London, ON

- Developed and implemented Python scripts to scrape data from diverse web sources, ensuring data accuracy and consistency
- Processed and cleaned large datasets, transforming raw web-scraped data into structured formats for analysis
- Applied machine learning algorithms to build a predictive model for materials properties, enhancing the efficiency and accuracy of predictions

Sales Associate / Service Advisor

To Wheels Bike Shop

March 2020 – Present

London, ON

PROJECTS

Game Engine | C++, GLSL, Git

- Crafted a game engine in C++, leveraging the power of OpenGL and GLFW
- Designed an efficient Entity Component System with custom memory handling
- Implemented advanced rendering techniques including deferred rendering and screen space decals
- Created a flexible particle system with compute shaders and instance rendering, enabling realistic effects and scalability
- Enhanced visual quality with a physically based bloom system
- Handles soft body physics objects using verlet integration
- Integrated character animation with animation blending

Third Person Networked Shooter | C++, GLSL, Git, Winsock

- Created a server authoritative 4 player shooter game using Winsock and UDP
- Utilized Google Protobufs for data serialization
- Implemented client side prediction, server reconciliation and dead reckoning

Robotron 2084 | C++, GLSL, Git

- Remade the classic game Roboton 2084 in my own game engine
- Incorporated all the main mechanics of the original game
- Implemented simple sprite animations

Project Dungeon eX | Unity, C#, Git

- Collaborated with two group members to create a 3rd person dungeon explorer game
- Originally made in our own engine, then was ported to Unity
- The player must avoid traps and solve hidden puzzles to progress through the world

TECHNICAL SKILLS

Languages: C++, GLSL, Python, MySQL, SQLite

Developer Tools: Git, VS Code, Visual Studio, Notepad++, MeshLab, Blender

Libraries: GLFW, GLM, FMod, Assimp, STB